Saskatchewan Agriculture, Food and Rural Revitalization

Crop Planning Guide 2005

BROWN SOIL ZONE

The following crop budgets are intended to serve as a guide to estimate the income and cost for different crops on fallow and stubble land using conventional tillage and direct seeding practices. These estimates do not represent provincial average cost of production figures.

The figures provide an estimate of variable expenses and other expenses (depreciation and investment cost for machinery, buildings and land). The grain prices are farm gate price estimates for 2005 crop production based on the information that was available in December, 2004.

On each farm, costs and yields differ due to soil type, climatic conditions and agronomic practices. Farm managers should determine their own costs, yields and expected commodity prices and adjust or change the assumptions listed on the back of this publication. Blank worksheets are provided for this purpose.

Using the guide
When comparing returns per acre of a continuous-stubble crop to a fallow-seeded crop, you must add the summer fallow costs to the fallow-seeded crop expenses. The best way of comparing summer fallow and stubble crops is to calculate the average returns per rotation acre for different rotations of crops. Refer to the example in this guide.

The break-even yields per acre show the level of yields producers would need to achieve to cover costs based on the estimated market price. The break-even prices for crops show the levels of prices needed by producers to cover costs if the estimated average yields are obtained. Farm managers are advised to interpret these figures very carefully, and evaluate new information as it becomes available.

Maximizing profitability
These crop budgets can be used to assist producers in deciding which crops will be the most profitable for the coming year or in deciding which crop rotations and farming practices may be the most profitable for the farm over the long term.

Short-term planning
Deciding which crops to grow this coming year can be made by comparing **return over variable expenses** (estimated gross revenue minus variable expenses). Deciding which crop to grow in any one year must also take into account a number of agronomic factors.

Long-term planning
When looking at long-term decisions such as crop rotations, direct seeding and continuous cropping, you must look at all costs, including fixed costs. The **return over total expenses** should be the basis of comparison between alternatives.

Switching to a longer crop rotation or direct seeding and/or continuous cropping will likely require a change in farm machinery. Before making these changes, the **return over all costs** needs to be considered.

Fertilizer
Phosphorous rates have been reduced to fall in line with recommended maximum safe rates for seed placed phosphate. Producers should follow their soil test recommendations keeping in mind to not exceed these recommended safe rates. Producers may choose to use higher rates on an individual basis, but caution is advised.

Changes for 2005
Some factors to take into consideration when projecting yields for this upcoming season are:

1) Nitrogen levels might be depleted due to the large quantities of straw produced from favourable weather conditions experienced in the 2004 growing season. Soil tests will advise you of your residual nutrient levels and suggest the additional fertility requirements for 2005.
2) Fall 2004 stubble subsoil moisture is adequate in most areas of the province (maps are available from SAFRR or on our website) however producers should check their own subsoil moisture before projecting yields. SAFRR also produces maps that forecast potential insect infestation levels. Take all these factors into consideration when projecting yields.

Custom work costs have increased to more closely reflect the increase in popularity of contracting these services. Insecticide use is also increased in our assumptions. An insecticide application is included to help control grasshoppers in lentils and aphids in peas.

CROP PRODUCTION COSTS ($/ACRE) BROWN SOIL ZONE 2

	Summerfallow		Fallow Seeded Crops								
	Tillage Fallow	Chem Fallow	Spring Wheat	Durum Wheat	CPS Wheat	Feed Barley	Oats	Flax	Lentil	Canary Seed	Mustard	Spring Wheat
REVENUE PER ACRE												
Estimated Yield (bu/ac,lb/ac) (A)			32.8	35.5	41.8	51.8	59.2	18.7	1177.0	1008.0	18.2	24.8
Est. On Farm Market Price/bus,lb (B)			3.53	3.94	2.87	1.92	1.75	7.75	0.18	0.12	8.00	3.53
Estimated Gross Revenue/ac (AxB)=(C)	**0.00**	**0.00**	**115.78**	**139.87**	**119.97**	**99.46**	**103.60**	**144.93**	**211.86**	**120.96**	**145.60**	**87.54**
EXPENSES PER ACRE												
Variable Expenses/acre												
Seed			6.97	8.31	6.72	5.79	7.32	7.50	23.40	6.65	16.50	6.97
Fertilizer - Nitrogen			7.60	7.60	7.60	7.60	7.60	7.60	2.28	7.60	7.60	17.10
- Phosphorus			7.80	7.80	7.80	7.80	7.80	3.90	5.20	7.80	5.20	7.80
- Sulphur & Other			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.60	0.00
Chemical - Herbicides	3.06	13.32	11.70	11.70	11.70	11.74	7.83	22.43	34.56	12.77	17.09	11.70
- Insecticides/Fungicides	0.00	0.00	1.10	1.10	1.10	0.00	0.00	0.00	1.38	1.89	0.40	1.10
- Others	0.00	0.00	2.76	3.12	3.12	2.88	2.04	1.20	1.80	1.75	0.00	2.76
Machinery Operating - Fuel	5.90	1.18	10.03	10.03	10.03	10.03	10.03	11.21	11.21	10.03	10.62	11.80
- Repair	2.45	1.75	7.20	7.20	7.20	7.20	7.20	8.64	10.74	7.20	7.20	7.20
Custom Work & Hired Labour	0.00	0.00	5.00	5.00	5.00	4.00	4.00	4.00	4.25	4.00	3.50	5.00
Crop Insurance Premium	0.00	0.00	4.56	5.23	6.38	5.96	5.56	10.63	15.61	7.87	9.17	3.44
Utilities & Miscellaneous	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28
Interest on Variable Expenses	1.06	1.41	1.63	1.69	1.68	1.59	1.50	1.93	2.73	1.70	2.00	1.88
Total Variable Expenses (D)	**15.75**	**20.94**	**69.63**	**72.06**	**71.61**	**67.87**	**64.16**	**82.31**	**116.43**	**72.53**	**85.16**	**80.03**
Other Expenses/acre												
Building Repair	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Property Taxes	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38
Insurance & Licences	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Machinery Depreciation	4.90	3.50	14.40	14.40	14.40	14.40	14.40	14.40	17.90	14.40	14.40	14.40
Building Depreciation	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Machinery Investment	2.35	1.68	6.91	6.91	6.91	6.91	6.91	6.91	8.59	6.91	6.91	6.91
Building Investment	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Land Investment	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95
Total Other Expenses (E)	**29.49**	**27.41**	**43.55**	**43.55**	**43.55**	**43.55**	**43.55**	**43.55**	**48.73**	**43.55**	**43.55**	**43.55**
Labour and Management (F)*												
Total Expenses (D+E+F)=(G)	**45.23**	**48.35**	**113.18**	**115.60**	**115.16**	**111.41**	**107.70**	**125.86**	**165.16**	**116.08**	**128.70**	**123.57**
Summerfallow Expense (H)			**45.23**	**45.23**	**45.23**	**45.23**	**45.23**	**45.23**	**45.23**	**45.23**	**45.23**	
Total Rotational Expense (G+H)=(I)			**158.41**	**160.84**	**160.39**	**156.65**	**152.94**	**171.09**	**210.39**	**161.31**	**173.94**	**123.57**
RETURNS PER ACRE												
Return over Variable Expenses (C-D)			**30.40**	**52.06**	**32.61**	**15.84**	**23.69**	**46.86**	**79.68**	**32.68**	**44.70**	**7.52**
Return over Total Rotational Expenses (C-I)			**-42.63**	**-20.97**	**-40.43**	**-57.19**	**-49.34**	**-26.17**	**1.47**	**-40.35**	**-28.34**	**-36.03**
BREAK-EVEN YIELD PER ACRE **												
To Cover Variable Expenses			**24.2**	**22.3**	**30.4**	**43.5**	**45.7**	**12.7**	**734.3**	**735.7**	**12.6**	**22.7**
To Cover Total Rotational Expenses			**44.9**	**40.8**	**55.9**	**81.6**	**87.4**	**22.1**	**1168.8**	**1344.3**	**21.7**	**35.0**
BREAK-EVEN PRICE PER BU/LB **												
To Cover Variable Expenses			**2.60**	**2.47**	**2.09**	**1.61**	**1.35**	**5.24**	**0.11**	**0.09**	**5.54**	**3.23**
To Cover Total Rotational Expenses			**4.83**	**4.53**	**3.84**	**3.02**	**2.58**	**9.15**	**0.18**	**0.16**	**9.56**	**4.98**

* These budgets do not include an estimate for owner/operator labour and management. This value varies greatly and depends on both the farm manager's needs as well as the ability of the farm business to generate income. Farm managers need to determine their own actual labour and management cost and add it to total expenses.

** Returns per acre, break-even yields and prices for fallow crops must include the previous year's fallow expenses. For simplicity we used 2005 tillage fallow values.

: 2005

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Conventional Seeded Stubble Crops									Direct Seeded Stubble Crops								
pring /heat	Durum Wheat	CPS Wheat	Feed Barley	Oats	Flax	Lentil	Canary Seed	Mustard	Spring Wheat	Durum Wheat	CPS Wheat	Feed Barley	Oats	Flax	Lentil	Canary Seed	Mustard
24.8	26.8	29.6	37.6	43.9	13.9	1005.0	661.0	15.4	24.8	26.8	29.6	37.6	43.9	13.9	1005.0	661.0	15.4
3.53	3.94	2.87	1.92	1.75	7.75	0.18	0.12	8.00	3.53	3.94	2.87	1.92	1.75	7.75	0.18	0.12	8.00
37.54	**105.59**	**84.95**	**72.19**	**76.83**	**107.73**	**180.90**	**79.32**	**123.20**	**87.54**	**105.59**	**84.95**	**72.19**	**76.83**	**107.73**	**180.90**	**79.32**	**123.20**
6.97	8.31	6.72	5.79	7.32	7.50	23.40	6.65	16.50	6.97	8.31	6.72	5.79	7.32	7.50	23.40	6.65	16.50
17.10	17.10	17.10	17.10	17.10	17.10	2.28	17.10	17.10	17.10	17.10	17.10	17.10	17.10	17.10	2.28	17.10	17.10
7.80	7.80	7.80	7.80	7.80	3.90	5.20	7.80	5.20	7.80	7.80	7.80	7.80	7.80	3.90	5.20	7.80	5.20
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.60
11.70	11.70	11.70	11.74	7.83	22.43	34.56	12.77	17.09	15.30	15.30	15.30	15.34	11.43	26.03	35.82	16.37	17.60
1.10	1.10	1.10	0.00	0.00	0.00	1.38	1.89	0.40	1.10	1.10	1.10	0.00	0.00	0.00	3.72	1.89	0.40
2.76	3.12	3.12	2.88	2.04	1.20	1.80	1.75	0.00	2.76	3.12	3.12	2.88	2.04	1.20	1.80	1.75	0.00
11.80	11.80	11.80	11.80	11.80	12.98	12.98	11.80	12.39	8.26	8.26	8.26	8.26	8.26	9.44	9.44	8.26	8.85
7.20	7.20	7.20	7.20	7.20	8.64	10.74	7.20	7.20	7.20	7.20	7.20	7.20	7.20	8.64	10.74	7.20	7.20
5.00	5.00	5.00	4.00	4.00	4.00	4.25	4.00	3.50	5.00	5.00	5.00	4.00	4.00	4.00	4.25	4.00	3.50
3.44	3.93	4.54	4.31	4.12	7.88	13.34	5.16	6.52	3.44	3.93	4.54	4.31	4.12	7.88	13.34	5.16	6.52
3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28
1.88	1.93	1.90	1.82	1.74	2.13	2.72	1.91	2.20	1.88	1.93	1.91	1.82	1.74	2.14	2.72	1.91	2.13
80.03	**82.27**	**81.27**	**77.72**	**74.22**	**91.04**	**115.92**	**81.30**	**93.98**	**80.09**	**82.33**	**81.33**	**77.78**	**74.29**	**91.10**	**115.99**	**81.36**	**90.88**
0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38
1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
14.40	14.40	14.40	14.40	14.40	14.40	17.90	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	17.90	14.40	14.40
0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
6.91	6.91	6.91	6.91	6.91	6.91	8.59	6.91	6.91	6.91	6.91	6.91	6.91	6.91	6.91	8.59	6.91	6.91
0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95
43.55	**43.55**	**43.55**	**43.55**	**43.55**	**43.55**	**48.73**	**43.55**	**43.55**	**43.55**	**43.55**	**43.55**	**43.55**	**43.55**	**43.55**	**48.73**	**43.55**	**43.55**
23.57	**125.81**	**124.81**	**121.27**	**117.77**	**134.58**	**164.65**	**124.84**	**137.53**	**123.64**	**125.88**	**124.88**	**121.33**	**117.83**	**134.65**	**164.71**	**124.91**	**134.43**
23.57	**125.81**	**124.81**	**121.27**	**117.77**	**134.58**	**164.65**	**124.84**	**137.53**	**123.64**	**125.88**	**124.88**	**121.33**	**117.83**	**134.65**	**164.71**	**124.91**	**134.43**
7.52	**23.32**	**3.68**	**-5.53**	**2.60**	**16.69**	**64.98**	**-1.98**	**29.22**	**7.45**	**23.26**	**3.62**	**-5.59**	**2.54**	**16.62**	**64.91**	**-2.04**	**32.32**
36.03	**-20.22**	**-39.86**	**-49.07**	**-40.95**	**-26.86**	**16.25**	**-45.52**	**-14.33**	**-36.09**	**-20.28**	**-39.92**	**-49.13**	**-41.01**	**-26.92**	**16.19**	**-45.59**	**-11.23**
22.7	**20.9**	**28.3**	**40.5**	**42.4**	**11.7**	**644.0**	**677.5**	**11.7**	**22.7**	**20.9**	**28.3**	**40.5**	**42.4**	**11.8**	**644.4**	**678.0**	**11.4**
35.0	**31.9**	**43.5**	**63.2**	**67.3**	**17.4**	**914.7**	**1040.4**	**17.2**	**35.0**	**31.9**	**43.5**	**63.2**	**67.3**	**17.4**	**915.1**	**1040.9**	**16.8**
3.23	**3.07**	**2.75**	**2.07**	**1.69**	**6.55**	**0.12**	**0 12**	**6.10**	**3.23**	**3.07**	**2.75**	**2.07**	**1.69**	**6.55**	**0.12**	**0.12**	**5.90**
4.98	**4.69**	**4.22**	**3.23**	**2.68**	**9.68**	**0.16**	**0.19**	**8.93**	**4.99**	**4.70**	**4.22**	**3.23**	**2.68**	**9.69**	**0.16**	**0.19**	**8.73**

For more information, call the Agriculture Knowledge Centre
Toll-Free: 1-866-457-2377
or the Provincial Crop Economics Specialist
Crop Development Branch
Saskatchewan Agriculture, Food and Rural Revitalization
Phone: 306-787-6613

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BROWN SOIL ZONE ASSUMPTIONS

1 Seed including cleaning:

- Spring wheat 1.15 bu./ac. at $6.06/bu.
- Durum wheat 1.3 bu./ac. at $6.39/bu.
- CPS wheat 1.3 bu./ac. at $5.17/bu.
- Barley 1.5 bu./ac. at $3.86/bu.
- Oats 2 bu./ac. at $3.66/bu.
- Mustard 10 lb./ac. at $1.65/lb. treated.
- Flax 30 lb./ac. at $14.05/bu. ($.25/lb.)
- Lentils 90 lb./ac. at $0.26/lb.
- Canary seed 35 lb./ac. at $0.19/lb.
- Seed prices are an average of seed grower price and commercial prices since farmers commonly clean their own grain for seed (except for mustard).

2 Fertilizer:

Nitrogen based on 46-0-0 at $390/tonne ($.38/lb.)

- Nitrogen on fallow crops 20 lb. N/ac.
- Nitrogen on stubble crops 45 lb. N/ac.
- Nitrogen on fallow and stubble lentils 6 lb. N/ac. based on 50 lb. of 12-51-0.

Phosphorus based on 12-51-0 at $397/tonne ($.26/lb.)

- The following lists the recommended rates of seed placed phosphate: Cereals 30 lb./ac., Mustard 20 lb./ac., Flax 15 lb./ac., Lentil 20 lb./ac., Pea 15 lb./ac. Source: SAFRR.

Sulphur based on 20-0-0-24 at $309/tonne ($.26/lb.)

- Sulphur on mustard at 10 lb. S/acre (application cost is included with machinery costs).

3 Pesticides

Herbicides:

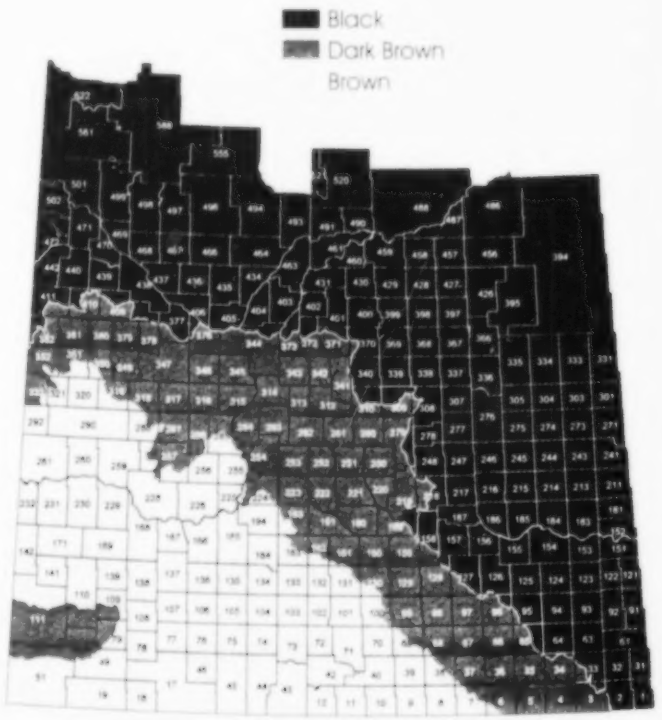
- Cereals: 25% of acres sprayed for wild oats (except oats) and 100% of acres for broadleaf weeds.
- Mustard fallow and conventional stubble: wild oats and broadleaf pre-plant 100% of acres. Mustard direct seed: 100% of acres for wild oats.
- Lentils, flax: broadleaf and grassy weeds 100% of acres.
- Canary seed: wild oats 25% of acres; broadleaf 100% of acres.
- Direct seeded stubble: pre-plant burn-off 100% of acres (glyphosate).
- Cereals, flax, canary seed: pre/post harvest 20% of all acres with glyphosate.

Others:

- All crops: seed treatment or inoculation: 100% of acres.
- Canary: insect control 20% of acres.
- Mustard: insect control 10% of acres per year (10% of $5/ac. aerial application cost included in custom work).
- Spring wheat, durum, CPS wheat: midge control 20% of acres per year (20% of $5/ac. aerial application cost included in custom work).
- Lentils: inoculation 100% of acres, desiccation 75% of acres, fungicide 20% of acres, insecticide 25% of acres for grasshoppers.
- Tillage fallow: winter annuals 100% of acres.
- Chem-fallow: 100% of acres for winter annuals, two broad spectrum burn-offs, one broadleaf.

4. **Operating costs** are based on recommended production practices in the brown soil zone.
5. **Fuel costs** are based on estimated fuel consumptions for the various farming operations with diesel fuel priced at 59 cents per litre.
6. **Machinery repair** rates are 6% of machinery investment per year for lentils and flax and 5% for all other crops.
7. **Saskatchewan Crop Insurance Corporation (SCIC)** premiums are based on 70% of the risk area(s) coverage plus 20%.
8. **Building repair** rates are 5% of building investment per acre.
9. **Operating interest** is calculated on all cash operating costs at 4.8% for 6 months on all crops, 18 months for fallow.
10. **Machinery Depreciation** is calculated at 10% of machinery investment per year on a straight line basis.
11. **Building depreciation** is based on a building investment of $18 per cultivated acre calculated at 5% per year on a straight line basis.
12. **Average machinery investment** is $144 per cultivated acre, $49 per tillage fallow acre and $35 per chem fallow acre. An additional machinery investment of $35 per acre is assumed for lentils.
13. **Investment cost** on building and machinery investment is calculated at an interest rate of 4.8% on the investment per acre.
14. **Land investment cost** of $13.95/ac. is calculated at 4.5% return on investment of $310 per cultivated acre.
15. **Crop prices** for 2005 production are farm gate price estimates for 2005 crop production, provided by SAFRR in December, 2004.
16. **Crop yields** are 120% of long term averages for SCIC risk areas 3 & 10, soil class H based on data compiled by SCIC. Crop yields for the average soil class in the risk area have been increased by 20% to reflect the increased productivity for 2005 over the long term averages and the higher than average input levels used in these budgets.
17. **Crops** that appear in both the Crop Planning Guides and the Specialty Crops Guide that share the same soil zone and are continuous cropped have their yields averaged between SAFRR'S ten-year averages and SCIC yields plus 20%.
18. **Labour and management** – These budgets do not include an estimate for owner/operator labour and management. This value varies greatly and farm managers need to determine their own actual labour and management cost.

Soil Zones of Southern Saskatchewan



For more information contact:
The Agriculture Knowledge Centre
Toll Free: 1-866-457-2377
or the Provincial Crop Economics Specialist
Crop Development Branch
Telephone (306) 787-6613

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This information is on Saskatchewan Agriculture, Food and Rural Revitalization's website along with most other publications that are produced by SAFRR.

Website: http://www.agr.gov.sk.ca

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BROWN SOIL ZONE ASSUMPTIONS

1. **Seed including cleaning:**
- Spring wheat 1.15 bu./ac. at $6.06/bu.
- Durum wheat 1.3 bu./ac. at $6.39/bu.
- CPS wheat 1.3 bu./ac. at $5.17/bu.
- Barley 1.5 bu./ac. at $3.86/bu.
- Oats 2 bu./ac. at $3.66/bu.
- Mustard 10 lb./ac. at $1.65/lb. treated
- Flax 30 lb./ac. at $14.05/bu ($.25/lb.)
- Lentils 90 lb./ac. at $0.26/lb.
- Canary seed 35 lb./ac. at $0.19/lb.
- Seed prices are an average of seed grower price and commercial prices since farmers commonly clean their own grain for seed (except for mustard).

2. **Fertilizer:**

Nitrogen based on 46-0-0 at $390/tonne ($.38/lb.)
- Nitrogen on fallow crops 20 lb. N/ac.
- Nitrogen on stubble crops 45 lb. N/ac.
- Nitrogen on fallow and stubble lentils 6 lb. N/ac. based on 50 lb. of 12-51-0.

Phosphorus based on 12-51-0 at $397/tonne ($.26/lb.)
- The following lists the recommended rates of seed placed phosphate: Cereals 30 lb./ac., Mustard 20 lb./ac., Flax 15 lb./ac., Lentil 20 lb./ac., Pea 15 lb./ac.. Source: SAFRR

Sulphur based on 20-0-0-24 at $309/tonne ($.26/lb.)
- Sulphur on mustard at 10 lb. S/acre (application cost is included with machinery costs)

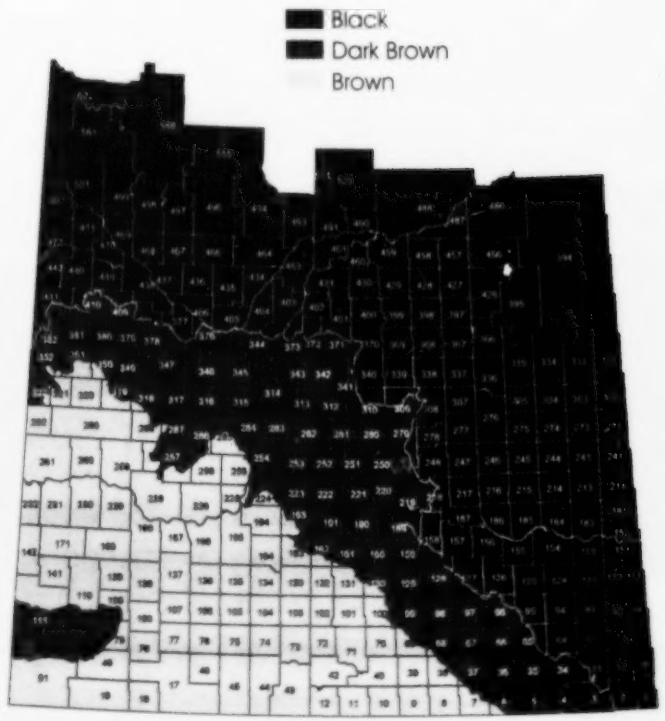
3. **Pesticides**:

Herbicides:
- Cereals: 25% of acres sprayed for wild oats (except oats) and 100% of acres for broadleaf weeds
- Mustard fallow and conventional stubble: wild oats and broadleaf pre-plant 100% of acres. Mustard direct seed: 100% of acres for wild oats
- Lentils, flax: broadleaf and grassy weeds 100% of acres
- Canary seed: wild oats 25% of acres, broadleaf 100% of acres
- Direct seeded stubble: pre-plant burn-off 100% of acres (glyphosate)
- Cereals, flax, canary seed: pre/post harvest 20% of all acres with glyphosate

Others:
- All crops: seed treatment or inoculation: 100% of acres
- Canary: insect control 20% of acres
- Mustard: insect control 10% of acres per year (10% of $5/ac. aerial application cost included in custom work)
- Spring wheat, durum, CPS wheat: midge control 20% of acres per year (20% of $5/ac. aerial application cost included in custom work)
- Lentils: inoculation 100% of acres, desiccation 75% of acres, fungicide 20% of acres, insecticide 25% of acres for grasshoppers.
- Tillage fallow: winter annuals 100% of acres
- Chem-fallow: 100% of acres for winter annuals, two broad spectrum burn-offs, one broadleaf

4. **Operating costs** are based on recommended production practices in the brown soil zone.
5. **Fuel costs** are based on estimated fuel consumptions for the various farming operations with diesel fuel priced at 59 cents per litre.
6. **Machinery repair** rates are 6% of machinery investment per year for lentils and flax and 5% for all other crops.
7. **Saskatchewan Crop Insurance Corporation (SCIC)** premiums are based on 70% of the risk area(s) coverage plus 20%.
8. **Building repair** rates are 5% of building investment per acre.
9. **Operating interest** is calculated on all cash operating costs at 4.8% for 6 months on all crops, 18 months for fallow.
10. **Machinery Depreciation** is calculated at 10% of machinery investment per year on a straight line basis.
11. **Building depreciation** is based on a building investment of $18 per cultivated acre calculated at 5% per year on a straight line basis.
12. **Average machinery investment** is $144 per cultivated acre, $49 per tillage fallow acre and $35 per chem fallow acre. An additional machinery investment of $35 per acre is assumed for lentils.
13. **Investment cost** on building and machinery investment is calculated at an interest rate of 4.8% on the investment per acre.
14. **Land investment cost** of $13.95/ac. is calculated at 4.5% return on investment of $310 per cultivated acre.
15. **Crop prices** for 2005 production are farm gate price estimates for 2005 crop production, provided by SAFRR in December, 2004.
16. **Crop yields** are 120% of long term averages for SCIC risk areas 3 & 10, soil class H based on data compiled by SCIC. Crop yields for the average soil class in the risk area have been increased by 20% to reflect the increased productivity for 2005 over the long term averages and the higher than average input levels used in these budgets.
17. **Crops** that appear in both the Crop Planning Guides and the Specialty Crops Guide that share the same soil zone and are continuous cropped have their yields averaged between SAFRR'S ten-year averages and SCIC yields plus 20%.
18. **Labour and management** – These budgets do not include an estimate for owner/operator labour and management. This value varies greatly and farm managers need to determine their own actual labour and management cost.

Soil Zones of Southern Saskatchewan



For more information contact:
The Agriculture Knowledge Centre
Toll Free: 1-866-457-2377
or the Provincial Crop Economics Specialist
Crop Development Branch
Telephone (306) 787-6613

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This information is on Saskatchewan Agriculture, Food and Rural Revitalization's website along with most other publications that are produced by SAFRR.

Website: http://www.agr.gov.sk.ca

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USING THE 2005 CROP BUDGETS

The relative profitability of crops can be difficult to determine when they are part of a longer-term rotation. Profits are easier to compare based on the net returns per rotation acre, which is the average profit or loss per acre, per year for a particular crop rotation.

Step 1. Adjust the Crop Budgets for the Crops to be Compared.
The crop budgets shown in this report are based on estimated costs and returns for each crop. The actual costs and returns on your own farm may be different. For example, the budget for direct seeded stubble canola assumes the use of a herbicide to control grassy weeds and volunteer grain. You may not have these weeds on the fields you are planning to seed. You may wish to change costs to suit the conditions on your own farm. The assumptions which were used to develop the budgets are listed on the back of this report. A blank worksheet is provided to permit you to adjust the budgets for each crop in the rotations you are comparing.

Step 2. Calculate the Average Returns per Rotation Acre.
Use the table below to list the different rotations of crops and fallow which you are considering for your farm. Show the complete rotation from the first year to the last year. Use the adjusted crop budgets for your own farm to calculate the average return per rotation acre for various rotations.

CROP ROTATION RETURNS	**Example 1 BLACK SOIL ZONE**			**Rotation 1**		**Rotation 2**		**Rotation 3**	
	Crop	Return over Total Expenses $/acre	Return over Variable Expenses $/acre	Crop	Return $/acre	Crop	Return $/acre	Crop	Return $/acre
Year 1	Canola on Fallow	$ (60.07)	$ 39.62						
Year 2	Spring Wheat Direct-Seeded	$ (30.00)	$ 27.98						
Year 3	Lentil Direct-Seeded	$ (10.46)	$ 52.70						
Year 4	CPS Direct-Seeded	$ (25.62)	$ 32.37						
Year 5	Tillage Fallow								
Year 6									
Total Returns		$ (126.15)	$ 152.67						
Total # of years in rotation		5	5						
Return per rotation acre		$ (25.23)	$ 30.53						

In this example, both returns over total expenses and returns over variable expenses are calculated.
If the average return is negative then the rotation with the smallest negative return would be best.
In this example, the fallow expenses are included with the canola on fallow expenses.

CROP PRODUCTION COSTS MY FARM	USE THIS WORKSHEET TO ADJUST THE CROP BUDGETS TO YOUR FARM COSTS			
CROPS				
REVENUE PER ACRE				
A Estimated yield (bu./ac.; lb./ac.)				
B Estimated on-farm market price per bushel or per pound				
C Estimated Gross Revenue per acre (AxB)				
EXPENSES PER ACRE				
Variable Expenses per acre				
Seed				
Fertilizer: Nitrogen				
Phosphorus				
Sulphur and Other				
Chemical: Herbicides				
Insecticides/Fungicides				
Others				
Machinery Operating: Fuel				
Repair				
Custom Work and Hired Labour				
Crop Insurance Premium				
Utilities and Miscellaneous				
Interest on Variable Expenses				
D Total Variable Expenses per acre				
Other Expenses per acre				
Building Repair				
Property Taxes				
Insurance and Licences				
Machinery Depreciation				
Building Depreciation				
Machinery Investment				
Building Investment				
Land Investment				
E Total Other Expenses				
F Labour and Management*				
G Total Expenses per acre (D+E+F)				
H Summerfallow Expense				
I Total Rotational Expense (G+H)				
RETURNS PER ACRE				
Return over Variable Expenses (C-D)				
Return over Total Expenses (C-I)				
BREAK-EVEN YIELD PER ACRE (lb./ac. or bu./ac.)**				
To Cover Variable Expenses				
To Cover Total Expenses				
BREAK-EVEN PRICE (per bushel or per pound)**				
To Cover Variable Expenses				
To Cover Total Expenses				

* These budgets do not include an estimate for owner/operator labour and management. This value varies greatly and depends on both the farm manager's needs as well as the ability of the farm business to generate farm income. Farm managers need to determine their own actual labour and management cost and add it to total expenses.

** Returns per acre, break-even yields and prices for fallow seeded crops must include the previous year's fallow expenses.